

WHAT IS CLAIMED IS:

1. A pixel comprising a radiation sensitive element and an adjustable current source in a parallel circuit configuration, said current source adapted to deliver a high current.
- 5 2. A pixel as recited in Claim 1, wherein said radiation is electromagnetic radiation such as light.
3. A pixel as recited in Claim 1, wherein said current source is a transistor.
4. A pixel as recited in Claim 1, wherein said current source comprises a switched capacitor circuit, said circuit comprising a capacitor, and a switch connected to the capacitor.
- 10 5. A pixel as recited in Claim 1, wherein said circuit further comprises at least one impedance element.
6. A pixel as recited in Claim 5, wherein said impedance element comprises a resistor.
- 15 7. A pixel as recited in Claim 3, further comprising a second switch in-between said capacitor and said radiation sensitive element, and the first switch being in a parallel configuration with said capacitor.
8. A pixel as recited in Claim 1, further comprising a first transistor in series with the photosensitive element and means for reading out the signal acquired in said photosensitive element and converted to a voltage drop across said first transistor, and further comprising a switch between said current source and said photosensitive element.
- 20 9. The pixel of Claim 8, wherein said means comprises at least a second transistor coupled to said photosensitive element and said first transistor.
- 25 10. A method of obtaining a calibrated read-out signal of a pixel having at least a photosensitive element, the method comprising the steps of :
  - adding a current generated by a current source in parallel with said photosensitive element to said photocurrent to a first signal;
  - reading said first signal;
- 30 11. reading said pixel with said current source off to thereby obtain a second signal; and

subtracting said first signal from said second signal, the resulting signal being amplified to obtain said read-out signal.

11. The method as recited in Claim 10, wherein the step of subtracting is executed in a circuit external to said pixel.

5 12. A method as recited in Claim 10, wherein said pixel is a CMOS based pixel having a load transistor in series with said photosensitive element.

*Subclaim* 13. A pixel for imaging applications fabricated in a MOS technology, said pixel comprising:

10 a photosensitive element and a first transistor having a gate and a first and second electrode and being in series with said photosensitive element, said first transistor and said photosensitive element thereby forming a first connection;

15 a second transistor having a gate, said second transistor being coupled to said first connection, thereby forming a second connection, and said second transistor being part of an amplifying circuit; and

a third transistor having a gate and having two electrodes, said third transistor being connected in said second connection between said first connection and said second transistor.

20 14. The pixel as recited in Claim 13, wherein said gate of said first transistor is at a first voltage and said first electrode of said first transistor is at a second voltage, said second electrode of said first transistor being connected to said photosensitive element, said gate of said second transistor being connected to said third transistor.

25 15. The pixel as recited in Claim 14, wherein said gate of said first transistor is at said first voltage and wherein one of said electrodes of said third transistor is connected to said gate of said second transistor and the other of said electrodes is connected to said first connection.

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